

## Effect of flexible work practices on productivity of Dangote Cement, Gboko Plant

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### Abstract

*In recent years, organizations overall the world have faced increasing pressure to improve efficiency, reduce operational downtime, and enhance overall productivity. In the cement manufacturing industry for instance, the challenge of balancing work and family responsibilities has become an important consideration, as it affects employees' well-being and ultimately shapes the productivity and performance of organizations. This study therefore examined the effect of flexible work practices on productivity of Dangote Cement, Gboko Plant. The study specifically examined the effect of flex-time, telecommuting, part-time arrangements, and job sharing on productivity of Dangote Cement Gboko Plant. A cross sectional survey design was adopted for the study. Questionnaire was used as the instrument for data collection. Taro Yamane formula was used to determined sample size of 238 from the population of 587 of employees of Dangote Cement Gboko. 238 copies of questionnaire was issued out to the respondents. However, only 211 questionnaires was retrieved by the researchers and analyzed. Simple percentages, mean and standard deviation were used for data presentation and analysis while multiple regression analysis was used to test the extent of the effect of independent variables on the dependent variable. The study deduced that flexible work practices have a significant effect on the productivity of Dangote Cement. Findings of the study revealed that flexi-time, telecommuting, part-time arrangements and job sharing all had significant positive effect on the productivity of Dangote Cement, Gboko Plant. The study recommended among others that government and organizations should re-strategize by upturning some of their unfriendly operational policies and imbibing new ones like the flexible work arrangements which are in accord with current contemporary global practices.*

**Keywords:** Flexible Work Practice, Flex-time, Telecommuting, Part-time Arrangement, Job Sharing, Productivity.

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### 1. Introduction

Every organization, whether profit-oriented or non-profit, is established to achieve specific objectives, with one of the most significant being enhanced productivity. Organizational productivity represents a multidimensional measure of performance that integrates both efficiency and effectiveness. As observed by

Nwinyokpugi (2018), productivity strengthens an organization's capacity to withstand competition and sustain profitability over time. However, organizations encounter various strategic, operational, cultural, and external challenges that may hinder their productivity levels. Productivity is also closely linked to competitiveness and is widely recognized as a key indicator of an

organization's long-term viability and success. As Kaino et al. (2025) note, an organization is considered productive when it efficiently and effectively harnesses its available resources such as human capital, technology, materials, and time to deliver goods and services that meet desired standards and objectives.

In the cement manufacturing industry, balancing work and family responsibilities is increasingly recognized as a factor that influences not only employee well-being but also overall organizational productivity. The industry is traditionally characterized by rigid schedules, physically demanding tasks, and continuous production cycles, which can create challenges for employees trying to manage personal and family obligations. In this context, flexible work practices such as shift rotations, adjustable working hours, job sharing, and the integration of digital monitoring tools for remote oversight have emerged as vital strategies for improving both employee satisfaction and operational efficiency (Luan et al., 2025; Çivilidağ, 2024).

The roots of flexible work practices can be traced back to the Industrial Revolution, when the traditional nine-to-five work model began to shift in response to changing production processes and labour demands (Berniell et al., 2023). However, it gained widespread recognition in the 20th century when organizations began to seek for innovative ways to improve employee satisfaction, productivity, and retention. Flexible work practices offer a myriad of benefits for both employers and employees (Wahab, Wahed, & Razak, 2024). From the employer's perspective, flexible work practices can lead to increased productivity, reduced absenteeism, and lower overhead costs. For employees, it provides greater autonomy over their schedules, improved work-life balance, and opportunities for personal and professional growth. Moreover, flexible

working arrangements have been shown to enhance employee morale, job satisfaction, and overall well-being, contributing to a positive organizational culture (Roberto, Penna, Felici, & Rao, 2023; Wahab, Wahed, & Razak, 2024).

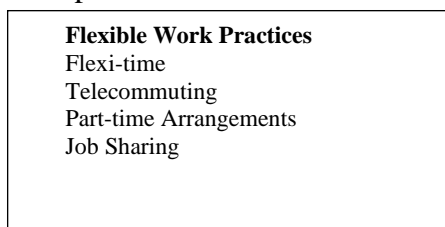
Flexible work practices are basically options that allow an employee to work outside the traditional confines of a standard organization of work with respect to such different modalities as amount, distribution of working time and place of work (Agbanu, Tsetim, Suleiman, 2023; Spreitzer, Cameron & Garrett, 2017). This is in direct contrast with traditional work arrangements that require employees to work at a standard time and place daily. Flexible working practices include flexi-time, part-time and telecommuting (Austin-Egole, Iheriohanma & Nwokorie, 2020). Flexi-time is a practice that allows full-time workers to choose the start and finish time of the working day within core hours (Chung & Lippe, 2018). Part-time work is the option where employees agree to work fewer hours weekly than the standard workweek (Oludayo, Falola, Ahaka & Fatogun, 2018). Telecommuting is a form of flexible work practice where employees work from remote locations using technology devices (Caillier, 2018). Job sharing relates to a situation where two or more employees share a job that is full time, these same employees share the compensation determined by the number of hours each of the employee does (Felstead & Henseke, 2017).

Globally, extensive evidence shows that flexible work practices have gained significant attention as a strategic human resource management tool. In the United States, for example, over 80% of households are either dual-career or single-parent families, leading more workers to juggle work and family responsibilities and thereby increasing the demand for flexible work schedules (Yohanes, Sautma & Togar, 2020; Kossek & Michel, 2018;

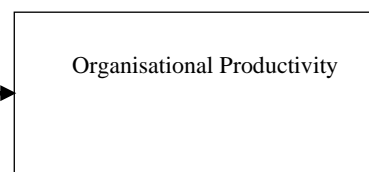
Spreitzer, Govender, Migiro & Kyule, 2025; Caillier, 2018; Baeza, Gonzalez & Wang, 2018). In the Middle East, studies affirm that flexible working arrangements serve as an effective mechanism for enhancing employee and organizational performance (Aziz-Ur-Rehman & Siddiqui, 2020). Evidence from Pakistan similarly reveals that flexible work schedules contribute to higher productivity, improved job satisfaction, greater efficiency, enhanced performance, and an overall better quality of life for employees (Çivilidağ & Durmaz, 2024). Research in South Africa also supports these findings, showing that organizations offering flexible work options benefit from enhanced employee morale, loyalty, and productivity. Such practices have been linked to reduced absenteeism, lower recruitment costs, and improved retention of valuable employees (Jamunarani & Syed, 2025; Jackson & Fransman, 2018). The 20th century saw rapid economic growth all over the world, giving rise to new business opportunities for organizations. The world has become a global village, and as a result, many industries and cement manufacturing industry inclusive are under pressure to work hard to establish and maintain a competitive advantage. This industry's

#### 4.1 Conceptual Framework

Independent Variables



Dependent Variables



focus on customer satisfaction which has prompted changes, which have led to changes in workplace structures (Gupta & Agrawal, 2021). Employees find it challenging to maintain a balance between work, family, and other personal matters, for instance, because cement manufacturing workers in Nigeria work longer hours and more than 48 hours per week in order to meet the demand (Rahman, Kistyanto & Surjanti, 2020; Adnan Bataineh, 2019). This has led to conflicts between work and personal life, which have been linked to mental health problems like stress and depression (Priya, Garg, & Tigga, 2020), which over time affect an organizational productivity. It is against the background that the study seeks to examine the effect of flexible work practices on the productivity of Dangote cement, Gboko Plant. Specifically the study seeks to examine the effect of flexi-time, telecommuting, job sharing on the productivity of Dangote Cement Plant, Gboko

#### 2. Literature Review

This section dwells on the review of relevant literature to the under the following headings; conceptual framework, empirical and theoretical framework

Fig. 4.1 Research Model of Flexible Work Practices and Organizational Productivity

Source: Researchers' Conceptualization, 2025.

The conceptual framework discusses two major variables, which are flexible work practices (independent variable) and Organizational productivity (dependent variable). A flexible work practice is

decomposed into, flex-time, telecommuting, part-time arrangements and job sharing. It is assumed that flexible work practices reflected by, flex-time, telecommuting, part-time arrangements

and job sharing impact on organizational productivity as expressed in terms of organizational efficiency and organizational effectiveness

### **Flexible Work Practices**

Salua, Afolayan, Lawal and Opele (2024) see Flexible work practices as those organisational policy which allow employees to dictate on when and where they work, provided they can meet up with their task and job schedule. These arrangements have gained prominence due to economic, technological, social, and family changes. They also include flexible working hours, flexi-time, part-time work, overtime, job sharing, teleworking, shift and weekend work, paid parental leave, annual hours, temporary work, annual hours contracts, and flexible leave arrangements. The practice allows workers to adjust their works schedules to their family engagements, domestic work, and any other social assignment such as taking children to school, taking care of the aging in society and others. It provides employees with the needed flexibility to manage their work schedules effectively and efficiently (Salua, Afolayan, Lawal & Opele, 2024).

An organization's working arrangements in terms of working hours, working locations, and working patterns are referred to as flexible work practices (Aziz-Ur-Rehman & Siddiqui, 2019). In order to help employees balance their personal and professional lives, flexible working arrangements like job sharing and telecommuting are frequently used) during "core hours," which are typically fixed or the time between the latest and earliest permissible starting time. Working from home or another central location that is convenient for clients is known as telecommuting (Tamunomiebi, Adim & Adubasim, 2018).

### **Dimensions of Flexible Work Practices**

Austin-Egole, Iheriohanma and Nwokorie, (2020) decompose flexible work practices

into four surrogates of flexi-time, job sharing, part-time and telecommuting

- i. **Telecommuting:** Telecommuting is a mutually agreed-upon arrangement between an employee and employer in which the employee works remotely, such as at home (Barbuto, et al, 2020). The ability to work from home had a weak but favorable link with higher quality output. Additionally, it was discovered that employee efficiency is significantly correlated with arrangements that permit employees to work at predetermined locations (Onyemaechi, Chinyere & Emmanuel, 2018). Telecommuters were expected to have greater control over their schedules, making it simpler to juggle work and home obligations. These benefits reduce stress and improve work-life balance, which helps employees perform better (Jaafar & Rahim, 2022). Work productivity and organizational competitiveness have been significantly impacted by the telecommuting system and the quality of management (Donabel, 2023).
- ii. **Flex—time:** Flexi-time, the most popular flexible work arrangement among males, provides advantages since it makes it easier to manage domestic duties while still working full-time. Flexi-time refers to the right of employees to adjust the scheduling of their work such as to switch up the starting and finishing times, as well as the number of hours worked each day or week, which may include accruing time for days off (Chung & Van der Horst, 2018). Working from home and working part-time are both advantageous, consistent with men employing flexible work arrangements with more freedom of choice (Wheatley,

2017). Flexibility supports alternative work arrangements, which are flexible in the employment relationship, flexibility in the scheduling of work, and flexibility in the location of work. Two representations of the new workplace were distinguished. One for high-skill individuals who opt for alternative work arrangements and another for low-skill workers who struggle to make ends meet and are subject to organizational requirements (Spreitzer, Cameron & Garrett, 2017).

iii. **Job Sharing:** Job sharing is basically splitting work between two employees in such a way that their joint weekly work hours equals the standard week working hours of one employee (Kotey & Sharma, 2016). This is where two or more employee share a job that is full time, these same employees share the compensation determined by the number of hours each of the employee does. Jobs are shared by splitting of days, splitting of weeks or alternate weeks. The accomplishment of job sharing is dependent on a very good partnership between the workers and also requires team work spirit by the employees involved (Kotey, 2017).

iv. **Part Time Arrangements:** Part-time workers are the workers that works less than 35 hours a week and this set of employee are reported to have the lowest levels of psychological and physical health problems (Clarke, 2011). Workers who wish to balance their work and family participates in part time work while workers that prefer working for longer hours are not satisfied with part time work. This type of flexible work arrangements is very popular in some of the European countries. For

example, over 70% of women in the Netherlands work part-time (Rahman, 2019). However, there are some negative assumptions about part-time work and part-time employees. One of them is that full-time employees are more engaged in work compared with part-time employees. However, Johnson, Shannon and Richman (2018) provided evidence contrarily to this assumption: i.e., that the level of engagement both for part-time and full-time employees is the same. Moreover, there are advantages of part-time work for example, employees working just part of the time are less likely to experience burnout compared with their full-time colleagues (Johnson, Shannon & Richman, 2018)

#### **Organizational Productivity**

According to Qureshi (2017) organizational productivity relates to how successful an organized group of people with a particular purpose perform a function. It comprises the actual output or results of an organization as measured against its intended outputs, objectives, or goals. However, high organizational productivity exists when all the parts of an organization work together to achieve great results. Mahlon and Memory (2020) claimed that organizational productivity is the success of meeting predefined objectives, targets, and goals within a specified time target. Organizational productivity focuses on elements that will measure employee performance which relates to organization benefit. Productivity measures the output of employees to the organization rather than financial among other measures. Effectiveness and efficiency are measures of organizational productivity as evident in various authorities like (Qureshi, 2017; Agbanu, Tsetim, & Suleiman, 2023; Edeh & Ukpe, 2019).

The study is anchored on contract theory propounded by Vroom (1964). According to this theory, employees have expectations that must be met in their daily lives. The relationship between human resources management practices and performance is based on two key fundamentals identified by the theory. The idea of valence explains how employee productivity can be increased through rewards and innovations that result in lower turnover. The second idea is expectancy, which includes things like employee training, higher job satisfaction, and customer satisfaction, all of which contribute to high employee performance and productivity. According to Ajayi, Olaniyi and Abubakar (2022) people with more balanced role systems experienced less stress, more role-ease, greater well-being, and more positive role specific experiences. Role balance, which is defined as a general orientation across roles, is both a cognitive affective pattern of organizing one's inner life and a behavioral pattern of acting across roles in a certain way.

The contract theory's applicability to independent and dependent variables is the foundation for this work's theoretical justification. According to the notion, each party to a contract has specific expectations that must be met, and how well those expectations are met will decide or impact the relationship's quality. For instance, employers anticipate that workers will demonstrate steadfast dedication to achieving objectives and targets by contributing meaningful work that, among other things, will improve the organization's performance. On the other hand, workers anticipate that their employer will implement a supportive, flexible work schedule policy to ensure they can fulfill their social objectives outside the workplace

### **Empirical Review**

Agbanu, Tsetim and Suleiman (2023) investigated the effect of flexible work arrangements on the productivity of publishing in Nigeria. The study revealed that flexi-time, job sharing, part time and telecommuting all have significant positive relationship with both employee effectiveness and employee efficiency of publishing firms in Nigeria. Mungania, Waiganjo and Kihoro (2016) carried out study to determine the influence of flexible work arrangement on performance of the banking industry in Kenya. The results of regression analysis revealed that there is a significant positive relationship between flexible work arrangement and performance. In Kenyan Gacheri (2019) examined the effects of flexible work arrangements, specifically telecommuting, compressed work weeks, job sharing, and flexi-time, on employee performance in Kenya. The study adopted a descriptive research design and random sampling. The independent variable is flexible work arrangements, telecommuting, compressed work weeks, job sharing, and flexi-time, while the dependent variable is employee performance. A questionnaire was used to collect data, and the reliability was tested using the Cronbach Alpha formula. Content analysis was used to analyze the qualitative data. The findings show that telecommuting, compressed work week, job sharing, and flexi-time all positively and significantly impacted employee performance. Similarly Donabel (2023) investigated the effects of flexible work arrangements variables of telecommuting, compressed work weeks, and flexi-time on employee performance. Using a descriptive causal research design and quantitative analysis, data was gathered through a survey of 110 BPO employees in ABC BPO Company online. Data is analyzed using multiple regression analysis to determine which among the factors contributes more to employee

performance. Telecommuting has no significant effect on employee performance. However, compressed work week and flexi-time have significant effects on employee performance.

### 3. Methodology

This study adopted a cross-sectional survey design. The choice of a cross-sectional survey design was appropriate for a study because it allowed the researcher to collect data from employees at a single point in time, making it a cost-effective and time-efficient approach for examining organizational issues. Since the study focuses on employees' perceptions, experiences, and self-reported behaviours regarding flex-time, telecommuting, part-time work, and job sharing, a survey provides the most suitable means of gathering standardized information from a large population. This design also supported the use of statistical analysis to determine the relationships between flexible work practices and productivity. A sample size of 238 was determined from a population of 587 employees of Dangote Cement Gboko using Taro Yamane's (1964) formula. Formula and its application are as shown below:

$$n = \frac{N}{1 + N(e)^2}$$

Where N = Population size

n = Sample size

e = level of significance

The researcher assumed 95% confidence

$$n = \frac{587}{1 + 587(0.05)^2}$$

$$n = \frac{587}{1 + 587(0.0025)}$$

$$n = \frac{587}{2.4675}$$

$$n = 238 \text{ Staff}$$

The data for this research were gathered from the primary source. The primary data

were collected through questionnaire administration. A questionnaire was adopted since it could collect information from a large sample and diverse region. The study used mean, percentage, standard deviation to analyze the data while hypotheses were tested using multiple regression. The Cronbach's Alpha Reliability for the flexible work practices and productivity instruments ranged from 0.78 to 0.89 which proofed the usefulness of the instruments in the study. 238 copies of questionnaire were issued out but only 211 validly answered copies of the questionnaires were retrieved.

The regression equation for the study was thus:  $Y = \beta_0 + \beta_1x_1 + \beta_2x_2 + \beta_3x_3 + \epsilon$ .

Where

Y = Productivity

$x_1$  = Flex-time

$x_2$  = Telecommuting

$x_3$  = Part-time Arrangements

$x_4$  = Job Sharing

$\beta_0$  = Intercept of the model (Constant)

$\beta_1, \beta_2, \beta_3, \beta_4$  = Regression Coefficients

Thus, it was hypothesized as follows;

Ho1: Flex-time does not have a significant effect on the productivity of Dangote Cement Plant Gboko

Ho2: Telecommuting does not have a significant effect on the productivity of Dangote Cement Plant Gboko

Ho3: Part-time arrangements do not have a significant effect on the productivity of Dangote Cement Plant Gboko

Ho4: Job sharing does not have a significant effect on the productivity of Dangote Cement Plant Gboko

**4. Results and Discussion**

Data collected from the respondents were analysed using correlation and regression

analyses with the aid of the Statistical Package for Social Sciences (SPSS 23) Software.

**Table 1: Model Summary**

R	R-Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
.795 <sup>a</sup>	.631	.621	.299	1.617

a Predictors (Constant), Flex-time, Telecommuting, Part-Time Arrangements, Job Sharing

b. Dependent Variable: Productivity

**Source:** Researcher's Computation, 2025.

The result from Table 1 shows that coefficient of determination (R square) explains the variation in the dependent variable due to changes in the independent variable. The R square value of .631 is an indication that there was variation of 63.1% in the productivity of Dangote

cement Gboko Plant, Benue State due to changes in flex-time, telecommuting, part-time arrangements and job sharing at 95% confidence interval. Also, the value of R (.795) from Table 1 shows that there was a strong relationship between the study variables.

**Table 2: Analysis of Variance (ANOVA)**

	Sum of Squares	df	Mean Square	F	Sig.
Regression	16.591	4	5.530	61.663	.000 <sup>b</sup>
Residual	9.686	108	.090		
Total	26.277	111			

a. Dependent Variable: Productivity

b. Predictors (Constant), Flexi-time, Telecommuting, Part-Time Arrangements, Job Sharing.

**Source:** Researcher's Computation, 2025.

The result from the ANOVA statistics in Table 2 indicates that the processed data, which is the population parameters, had a significance level of .000 which shows that the data is ideal for making a conclusion on the population's parameter as the value of significance (p-value) is less than 5%. This implies that flex-time, telecommuting, part-time arrangements and job sharing significantly affected the productivity of Dangote cement, Gboko Plant. The significance value was less than 0.05 which indicates that the model was

statistically significant (F =61.663, P = .000 < 0.05).



**Table 3: Regression Coefficients**

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	.937	.221		4.248	.000
Flexi-time	.386	.123	.292	2.693	.000
Telecommuting	.590	.128	.404	5.350	.000
Part-time	.593	.129	.406	5.350	.000
Job Sharing	.376	.124	.293	2.683	.000

a. Dependent Variable: Productivity.

**Source:** Researcher’s Computation, 2025.

The result in Table 3 shows that productivity = .937 + .386 (flex-time) + .590(telecommuting) +.593(part-time)+.376 (Job sharing). The study found that the p-values for flexi-time telecommuting, part-time arrangements and job sharing were (.000, .000 .000,000) respectively were less than 0.05 which is an indication each variable has a positive effect on the productivity of Dangote cement, Gboko Plant. The findings of this study reveal that flexible work practices specifically flex-time, telecommuting, part-time work, and job sharing have significant positive effects on the productivity of employees at Dangote Cement, Gboko Plant. The high regression coefficients and statistically significant p-values ( $p < 0.05$ ) suggest that each of these flexibility dimensions plays a crucial role in enhancing organizational productivity.

The positive impact of flex-time ( $\beta = 0.386$ ) indicates that allowing employees to adjust their work hours within agreed limits can enhance concentration, reduce lateness and absenteeism, and foster a stronger sense of autonomy. Managers should therefore consider adopting

structured flex-time schedules that align individual employee preferences with operational demands. Such arrangements can increase job satisfaction and motivation, ultimately improving work output and efficiency. Telecommuting ( $\beta = 0.590$ ) also emerged as a strong predictor of productivity. This implies that enabling employees to work remotely, particularly for administrative and analytical roles, could lead to substantial efficiency gains. For management, this means investing in reliable digital infrastructure, cybersecurity measures, and clear communication protocols to maintain collaboration and accountability among remote workers. Furthermore, telecommuting can help the organization minimize overhead costs associated with office space and utilities while sustaining high performance levels.

Part-time arrangements ( $\beta = 0.593$ ) demonstrated the highest influence on productivity. This finding underscores the potential of utilizing part-time workers to maintain operational flexibility without compromising efficiency. Managers can leverage this strategy by engaging skilled

workers on part-time contracts to handle peak production periods, thereby optimizing labor costs and resource allocation. Additionally, part-time work may attract experienced professionals seeking work-life balance, enriching the talent pool available to the company. Lastly, job sharing ( $\beta = 0.376$ ), though relatively lower in magnitude; still has a positive and significant effect on productivity. This suggests that dividing tasks between two or more employees can maintain workflow continuity and reduce burnout. Managers could implement job-sharing schemes in departments where roles are intensive or require continuous coverage. Proper coordination and communication mechanisms should, however, be put in place to ensure task clarity and performance consistency.

#### **Discussion of Results**

The analysis of the data collected from the respondents revealed that flexi-time has a positive and statistically significant effect on the productivity of employees at Dangote Cement, Gboko Plant. The regression output, which produced a p-value of 0.000 ( $p < 0.05$ ), provides strong statistical evidence to reject the null hypothesis and conclude that flexi-time meaningfully enhances productivity. This finding suggests that allowing employees discretion over when to begin and end their workday contributes to higher work output, efficiency, and overall organizational performance.

The result aligns with the theoretical assumptions of the Work–Life Balance Theory, which posits that employees perform better when they experience reduced conflict between work and personal demands. Flexi-time directly supports this balance by giving workers the autonomy to adjust their schedules to meet personal responsibilities without compromising work commitments. From the standpoint of the Job Demand–Control Model (Karasek, 1979), flexi-time

increases employees' decision latitude, thus reducing job stress and enabling them to manage work demands more effectively. The model argues that when employees have greater control over their tasks or schedules, they experience improved psychological well-being and are more productive.

Practically, this finding is consistent with empirical evidence. Agbanu, Tsetim, and Suleiman (2023) reported that flexi-time significantly enhances employee effectiveness and efficiency, reinforcing the argument that flexible scheduling promotes organizational productivity. Similarly, Gacheri (2019) found that flexi-time has a significant positive impact on employee performance in the manufacturing sector, a context highly comparable to cement production, where rigid shifts often create fatigue and work-life imbalance. These empirical studies support the conclusion that flexi-time is not only theoretically justified but also practically beneficial across different industrial settings.

From a practical standpoint, flexi-time may be particularly impactful in the cement manufacturing environment because of the demanding nature of the job. Granting schedule flexibility allows employees to manage personal obligations, avoid lateness caused by transportation challenges, and reduce burnout associated with fixed shift patterns. By enabling workers to choose the most convenient start and closing times within operational limits management can foster a more motivated and psychologically prepared workforce. A motivated workforce is more likely to meet daily targets, maintain high concentration levels, and avoid errors that could slow down production.

This result is logical and expected. In contemporary workplaces, especially in industries with increasing automation and diversified tasks, flexibility serves as a non-monetary incentive that boosts morale

and encourages employees to take greater ownership of their roles. When employees feel trusted to manage their time, they reciprocate with greater commitment, punctuality, and productivity. In a competitive manufacturing environment such as Dangote Cement, where output targets must be met daily, the ability of employees to align work schedules with personal peak-performance periods can significantly improve overall productivity. Thus, the positive relationship between flexi-time and productivity at Dangote Cement is not only statistically supported but also theoretically meaningful and practically sound.

The analysis of the data collected from respondents showed that part-time employment exerted a positive and statistically significant effect on the productivity of Dangote Cement, Gboko Plant, as indicated by the regression result where the p-value (0.000) was lower than the 5% significance level ( $0.000 < \alpha = 0.05$ ). This implies that employees engaged on part-time arrangements contribute meaningfully to organisational output and operational efficiency. In practical terms, part-time employees often experience reduced work fatigue, improved work–life balance, and greater job focus, which enable them to perform assigned tasks more efficiently during their scheduled hours. For instance, in production environments like cement manufacturing, rotational and part-time schedules help reduce burnout, ensure continuous workflow, and maintain operational stability ultimately enhancing productivity. These findings align with the empirical work of Mamaghani (2019), who reported that part-time work is positively associated with employee productivity and favourable perceptions of organisational performance.

Furthermore, the result is supported by Vroom's Expectancy Theory (1964), which argues that employees are motivated

to exert effort when they believe that (i) their effort will lead to good performance (expectancy), (ii) good performance will lead to desired outcomes (instrumentality), and (iii) the outcomes are personally valuable (valence). Part-time employees often perceive that their manageable schedules, clearly defined responsibilities, and reduced role overload increase their likelihood of performing well, which strengthens expectancy. When performance is linked to tangible rewards such as fair wages, job security, or opportunities for extended contracts, instrumentality is reinforced. Finally, because the flexibility associated with part-time work satisfies personal goals such as education, family responsibilities, or entrepreneurial pursuits, valence becomes high—resulting in greater motivation and enhanced productivity. Thus, the positive effect observed in this study can be theoretically explained as part-time workers being highly motivated due to favourable expectancy, instrumentality, and valence perceptions.

This findings underscore the strategic value of incorporating part-time employment within large manufacturing organizations. When carefully structured, part-time work not only reduces operational strain caused by excessive workload on full-time staff but also attracts a diverse pool of workers who may possess specialised skills or high motivation levels. Consequently, part-time arrangements when aligned with clear performance expectations and fair reward systems can serve as a practical human resource strategy for boosting productivity and sustaining organizational performance.

The analysis of data collected from respondents indicates that telecommuting has a positive and statistically significant effect on the productivity of Dangote Cement, Gboko Plant. Using regression analysis at the 5% level of significance, the hypothesis was tested and the results

revealed a p-value of 0.001, which is lower than the significance threshold of 0.05. This confirms that telecommuting is a significant predictor of productivity in the organization. Statistically, this is expressed as  $p\text{-value} (0.001) < \alpha (0.05)$ , implying that the likelihood of the observed effect occurring by chance is extremely low.

These findings align with the empirical work of Agbanu, Tsetim, and Suleiman (2023), who found that telecommuting had a significant positive relationship with employee effectiveness and efficiency in publishing companies. Their study suggests that telecommuting enhances employees' ability to focus, reduces non-productive time, and improves performance outcomes. However, the current result contradicts Donabel (2023), who reported that telecommuting had no significant effect on employee performance in a BPO manufacturing company, suggesting that contextual factors such as industry type, task nature, technology readiness, and management culture may influence telecommuting outcomes differently across organizations. Telecommuting acts as a job resource by reducing physical and psychological job demands such as long commutes, workplace distractions, and rigid schedules. According to the Job Demand Resource model, increasing job resources enhances work engagement, which in turn improves productivity. Employees working remotely often experience higher autonomy and better work-life balance, enabling them to perform optimally. Manufacturing organizations with administrative units have also may observe better staff concentration and reduced operational costs through partial telecommuting arrangements. This is particularly relevant for Dangote Cement employees working in non-production roles such as procurement, HR, finance, and planning, whose tasks are compatible with remote execution.

Based on the statistical evidence, theoretical foundations, and practical realities, it is reasonable to argue that telecommuting enhances productivity in Dangote Cement, Gboko, especially in roles that are information-based or require mental rather than physical labor. Telecommuting offers employees the flexibility and autonomy needed to optimize their workflow, minimize workplace disruptions, manage personal obligations more effectively, and maintain higher concentration levels. These benefits collectively boost individual performance, which ultimately reflects in organizational productivity.

The contrasting findings reported by Donabel (2023) may stem from differences in industry operations, job characteristics, or technological infrastructure. In manufacturing environments where work tasks are heavily machine-dependent or require physical presence, telecommuting may provide little to no productivity benefit. However, in Dangote Cement's administrative and support departments, telecommuting aligns well with task requirements, thereby enhancing productivity as evidenced by the regression results.

The analysis of data obtained from respondents indicates that job sharing has a positive and statistically significant effect on the productivity of Dangote Cement, Gboko Plant. The regression results show a p-value of 0.000, which is lower than the 5% significance threshold ( $p\text{-value} 0.000 < \alpha = 0.05$ ), confirming that the effect is significant. This finding aligns with the empirical work of Gacheri (2019), who demonstrated that job sharing enhances employee performance by fostering cooperation, reducing role overload, and improving work quality. The implication of this outcome is that when two or more individuals jointly perform the responsibilities of a single job role, the arrangement enhances collaboration,

promotes stronger team spirit, reduces fatigue, and ultimately contributes to greater organizational productivity.

Vroom's Expectancy Theory (1964) explains employee motivation based on three key components: expectancy, instrumentality, and valence, and it provides strong theoretical grounding for the positive relationship between job sharing and productivity at Dangote Cement, Gboko Plant. Under a job-sharing arrangement, employees often experience higher expectancy, as the shared workload makes tasks appear more achievable. When two people jointly handle a role, each partner perceives that their effort is more likely to lead to successful performance because responsibilities are divided based on individual strengths and capacities. This reduces fatigue, role overload, and errors, thereby increasing the belief that "if I put in effort, I can perform well." Job sharing also enhances instrumentality, the belief that good performance will lead to valued outcomes. In many organizations, including manufacturing environments, job sharers receive recognition for teamwork, reliability, and consistent performance. Knowing that shared effort will still result in positive evaluation increases employees' willingness to contribute effectively. Finally, job sharing strengthens valence, as employees often value the associated outcomes: better work-life balance, reduced stress, flexibility, and improved job satisfaction. These valued outcomes make employees more motivated to maintain high productivity while working collaboratively. According to Vroom's theory, motivation is highest when expectancy, instrumentality, and valence are all strong. Job sharing satisfies all three conditions, which explains why the study revealed a significant positive effect of job sharing on productivity at Dangote Cement, Gboko Plant. By making the work

more achievable, the rewards clearer, and the outcomes more personally meaningful, job sharing enhances employee motivation and consequently improves organizational productivity.

In sectors with physically demanding tasks or long work hours, such as manufacturing, job sharing helps reduce burnout and enables employees to maintain consistent job performance. Teams can divide tasks, cross-check each other's work, and cover skill gaps more effectively. While the statistical evidence confirms the positive effect of job sharing on productivity, it is important to recognize that the benefits depend on how well the arrangement is managed. Effective job sharing requires: (i) Clear definition of roles and responsibilities (ii) Strong communication between job-sharing partners (iii) Supervisory support and coordination and fair workload distribution. When these elements are in place, job sharing becomes a powerful tool for enhancing organizational productivity. However, if poorly implemented, it can lead to role confusion, coordination problems, and reduced accountability. Therefore, for Dangote Cement, Gboko Plant, the significant positive effect identified in this study suggests that the operational structure and management style already support collaborative work, making job sharing a viable strategy for strengthening productivity.

## **5. Conclusion and Recommendations**

### **5.1 Conclusion**

This paper examined the effect of flexible work practices on the productivity of Dangote Cement, Gboko. The study concludes that Dangote Cement needs to create flexi-time work arrangements for employees in order to sustain a high level of productivity. The study also concludes that Dangote Cement should allow some employees to share the same job so as to enhance their efficiency and effectiveness.

The study further concludes that there is a significant telecommuting on productivity of Dangote cement, Gboko Plant. The study also established that part-time employment has a positive significant effect on productivity of Dangote cement. The implication of the results is that employees working just on part of the time are less likely to experience burnout compared with their full-time colleagues which make them to be more productive. Lastly the study concludes that job sharing has positive significant effect on the productivity of Dangote Cement. The study therefore deduced that flexible work practices have a significant effect on productivity of Dangote cement, Gboko Plant.

It was observed that part-time arrangement contribute more to the overall productivity of Dangote cement with the beta values of .593, followed by telemuting with beta values of .590. flex-time came third in terms of contribution to the productivity of Dangote Cement with the beta values of .386. This implies that Dangote cement should encourage part-time employment arrangement especially for employees with professional skills in order to enhance the overall productivity of the organization

The results of the study validate contract theory propounded by Vroom (1964). According to this theory, employees whose expectations are met are likely more productive than those whose expectations are not met. Employees with more balanced role systems experience less stress, greater well-being; more satisfy with their jobs and are emotionally attached to the organization. The study also takes a holistic approach by considering the relevant dimensions of flexible work practices, namely, telecommuting, flex-time, job sharing and part-time arrangement. The study was limited to the dangote cement, Gboko Plant, its findings cannot be generalized to other sectors of

the economy. The study also failed to clearly measure of proxies of productivity.

### **5.2 Recommendations**

The study made the following recommendations based on the findings of the study.

Management of Dangote Cement Company in Nigeria should provide all employees with modern information technology facilities to support telecommuting, as this will help reduce the pressures associated with balancing work and personal responsibilities. Furthermore, since flexi-time has been shown to positively influence organizational productivity, the company should allow staff across all categories to choose suitable start and closing times where necessary.

In addition, management should adopt job-sharing arrangements, given their potential to enhance productivity, while also embracing part-time work options, which are particularly convenient for women and other professionals and have been found to significantly improve organizational performance. Overall, both the government and corporate organizations should re-strategize by reviewing outdated operational policies and adopting modern flexible work practices that align with contemporary global standards.

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